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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,791	09/10/2003	Timo Kivinen	KOLS.049PA	5622

7590 08/25/2006
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EXAMINER

PHAN, HUY Q

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

67

Office Action Summary	Application No. 10/659,791	Applicant(s) KIVINEN, TIMO	
	Examiner Huy Q. Phan	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Amendment filed on date: 07/17/2006.
Claims 1-22 are still pending.
Claims 21 and 22 are newly added.

Response to Arguments

2. Applicant's arguments, see remarks, with respect to the rejection(s) of claim(s) 1-20 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim pertains to "program code", which is non-statutory since it is an abstract idea. However, it is noted that if the claim language is changed from "program code" to "a computer readable medium including a program executable by a computer", the claim will become statutory.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 21 is rejected under 35 U.S.C. 112 because the claim is a single means claim (see MPEP 2164.08(a)).

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto (US-6,829,484) in view of Itabashi (US-2002/0087542).

Regarding claim 1, Kimoto discloses a method for determining cell-specific location information to be used in a mobile communication network (col. 7, lines 5-10), the method comprising

determining substantially geographical coverage area of the cell (col. 7, lines 10-28), and

storing, cell-specific location information and the geographical coverage area information on the cell in a database such that the two aspects of the information are interlinked (col.7, lines 5-53). Kimoto also discloses obtaining cell-specific location information on the mobile station to be used in the mobile communication network and transmitting this information to the base station (col. 7, lines 5-53). Kimoto does not specifically teach encrypting the information before transmitting it to the base station. However, Itabashi disclose a mobile station establishing a connection to a mobile communication network or an information center ([0062]-[0070]) thus it is in the same field of endeavor. Itabashi further teaches transmitting information from the mobile station to the base station and encrypting the information at the mobile station before transmission ("performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80" see [0070]). Also, Itabashi must encrypt the information using a predetermined encrypting technique in order for the information center to be able to decrypt the information. Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply the encryption technique of Itabashi to encrypt the cell-specific location information of Kimoto in order to "provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety" see [0014].

Regarding claim 2, Kimoto and Itabashi disclose the method of claim 1. Kimoto further discloses establishing a data transfer connection from a service provider external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 16, lines 42-58).

Regarding claim 3, Kimoto and Itabashi disclose the method of claim 1. Itabashi further discloses encrypting, in a mobile station connected to the mobile communication network, the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (fig. 9 and [0070]).

Regarding claim 4, Kimoto and Itabashi disclose the method of claim 3. Kimoto further discloses transmitting a cell positioning service request from the mobile station ("inputting" see col. 7, lines 15-20) to the service provider, the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, in response to the request (col. 7, lines 15-33), retrieving from the database through the data transfer connection the geographical coverage area information corresponding with the encrypted, cell-specific location information on at least one mobile station in the request (col. 7, lines 33-53), and transmitting a cell positioning service message to the mobile station, the cell positioning service message including at

least the geographical coverage area information (col. 7, lines 33-53).

Regarding claim 5, Kimoto and Itabashi disclose the method of claim 4. Kimoto further discloses transmitting the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 6, Kimoto and Itabashi disclose the method of claim 1. Kimoto further discloses storing the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks in the database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

Regarding claim 7, Kimoto discloses a system for determining cell-specific location information to be used in a mobile communication network (col. 7, lines 5-10), wherein at least one network element of the mobile communication network is configured to determine substantially the geographical coverage area of the cell (col. 7, lines 10-28), and cell-specific location information and the geographical coverage area information on the cell are configured to be stored in a database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

Kimoto also discloses obtaining cell-specific location information on the mobile station to be used in the mobile communication network and transmitting this information to the base station (col. 7, lines 5-53). Kimoto does not specifically teach

encrypting the information before transmitting it to the base station. However, Itabashi disclose a mobile station establishing a connection to a mobile communication network or an information center ([0062]-[0070]) thus it is in the same field of endeavor. Itabashi further teaches transmitting information from the mobile station to the base station and encrypting the information at the mobile station before transmission ("performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80" see [0070]). Also, Itabashi must encrypt the information using a predetermined encrypting technique in order for the information center to be able to decrypt the information. Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply the encryption technique of Itabashi to encrypt the cell-specific location information of Kimoto in order to "provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety" see [0014].

Regarding claim 8, Kimoto and Itabashi disclose the system of claim 7. Kimoto further discloses wherein a connection is provided from a service provider external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 16, lines 42-58).

Regarding claim 9, Kimoto and Itabashi disclose the system of claim 7. Itabashi further discloses wherein a mobile station connected to the mobile communication network is configured to encrypt the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (fig. 9 and [0070]).

Regarding claim 10, Kimoto and Itabashi disclose the system of claim 9. Kimoto further discloses wherein the mobile station is configured to transmit a cell positioning service request to the service provider ("inputting" see col. 7, lines 15-20), the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, in response to the request (col. 7, lines 15-33), the service provider is configured to retrieve from the database the geographical coverage area information corresponding with the encrypted, cell-specific location information on at least one mobile station in the request (col. 7, lines 15-33), and to transmit a cell positioning service message to the mobile station, the cell positioning service message including at least the geographical coverage area information (col. 7, lines 33-53).

Regarding claim 11, Kimoto and Itabashi disclose the system of claim 10. Kimoto further discloses wherein the service provider is configured to transmit the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 12, Kimoto and Itabashi disclose the system of claim 10. Kimoto further discloses wherein the cell positioning service message further includes at least some of the following information:

location information on at least one other mobile station

location information on at least one service determined in the service request
(col. 7, lines 33-53)

suggested route to a target destination determined in the service request (col. 63, lines 1-12)

estimated length of distance to be travelled and time used by the mobile station on alleged route information on a cell-specific service (col. 64, lines 4-23).

Regarding claim 13, Kimoto and Itabashi disclose the system of claim 7. Kimoto further discloses wherein the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks are configured to be stored in the database such that the two aspects of the information are interlinked (col. 7, lines 33-53).

Regarding claim 14, Kimoto discloses establishing a connection to a mobile communication network (col. 7, lines 5-53). Kimoto also discloses obtaining cell-specific location information on the mobile station to be used in the mobile communication network and transmitting this information to the base station (col. 7, lines 5-53). Kimoto does not specifically teach encrypting the information before transmitting it to the base

station. However, Itabashi disclose a mobile station establishing a connection to a mobile communication network ([0062]-[0070]) thus it is in the same field of endeavor. Itabashi further teaches transmitting information from the mobile station to the base station and encrypting the information at the mobile station before transmission (“performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80” see [0070]). Also, Itabashi must encrypt the information using a predetermined encrypting technique in order for the information center to be able to decrypt the information. Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant’s invention to apply the encryption technique of Itabashi to encrypt the cell-specific location information of Kimoto in order to “provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety” see [0014].

Regarding claim 15, Kimoto and Itabashi disclose the mobile station of claim 14. Kimoto further discloses which is further configured to transmit a cell positioning service request to a service provider providing a cell positioning service, the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station, and receive a cell positioning service message from the service provider, the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information.

Regarding claim 16, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to present the geographical coverage area information in the cell positioning service message as graphic map information (fig. 13).

Regarding claim 17, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to receive from the service provider the cell positioning service message including at least one aspect of the encrypted, cell-specific location information and the geographical coverage area information linked (col. 7, lines 33-53) thereto, determine the encrypted, cell-specific location information corresponding with its location (col. 18, lines 20-25), and update its current location into the geographical coverage area information in the cell positioning service message (col. 40, lines 1-49).

Regarding claim 18, Kimoto and Itabashi disclose the mobile station of claim 15. Kimoto further discloses which is further configured to determine the encrypted, cell-specific location information corresponding with its location, in response to a change in location (col. 18, lines 20-25), store successive encrypted, cell-specific location information, transmit a cell positioning service request to a service provider providing a cell positioning service, the cell positioning service request including the encrypted, cell-specific location information stored in memory, and receive a cell positioning service

message from the service provider (fig. 13), the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information stored in memory (col. 40, lines 1-49).

Regarding claim 19, Kimoto and Itabashi disclose the mobile station of claim 15. Itabashi further discloses including computer program means [0178] for encoding cell-specific location information on mobile stations to be used in a mobile communication network into encrypted cell identities according to a predetermined algorithm, and computer program means for decoding the encrypted cell identities into cell-specific location information on a mobile station to be used in the mobile communication network according to a predetermined algorithm (described as "The control circuit 207 performs overall control of the communication terminal 20, so as to, for example, perform deciphering processing of the various types of information demodulated by the reception/transmission circuit 2022, performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80", see fig. 9 and [0070]).

Regarding claim 20, Kimoto and Itabashi disclose the mobile station of claim 19. Kimoto further discloses including computer program means ("FIG. 58 is a block diagram schematically showing a software structure of the mobile terminal", see col. 13, lines 36-38) for generating a cell positioning service request to a service provider

providing a cell positioning service (fig. 58), the cell positioning service request including the encrypted cell identity of at least one mobile station (col. 55, lines 22-30).

Regarding claim 21, Kimoto discloses a network element for a mobile communication network (fig. 1), wherein the network element is configured to determine substantially the geographical coverage area of the cell (col.7, lines 5-53), and the network element is configured to store cell-specific location information and the geographical coverage area information on the cell in a database such that the two aspects of the information are interlinked (col.7, lines 5-53).

Kimoto also discloses obtaining cell-specific location information on the mobile station to be used in the mobile communication network and transmitting this information to the base station (col. 7, lines 5-53). Kimoto does not specifically teach encrypting the information before transmitting it to the base station. However, Itabashi disclose a mobile station establishing a connection to a mobile communication network or an information center ([0062]-[0070]) thus it is in the same field of endeavor. Itabashi further teaches transmitting information from the mobile station to the base station and encrypting the information at the mobile station before transmission ("performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80" see [0070]). Also, Itabashi must encrypt the information using a predetermined encrypting technique in order for the information center to be able to decrypt the information. Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply

the encryption technique of Itabashi to encrypt the cell-specific location information of Kimoto in order to "provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety" see [0014].

Regarding claim 22, Kimoto discloses a unit for a mobile station, the unit comprising: program code for delivering the cell identities further to the actual application program of the cell positioning service (col. 39, lines 31-66).

Kimoto also discloses obtaining cell-specific location information on the mobile station to be used in the mobile communication network and transmitting this information to the base station (col. 7, lines 5-53). Kimoto does not specifically teach encrypting the information before transmitting it to the base station or program code for encoding cell-specific location information on at least one cell by using a predetermined encryption algorithm. However, Itabashi disclose a mobile station establishing a connection to a mobile communication network thus it is in the same field of endeavor. Itabashi further teaches transmitting information from the mobile station to the base station and encrypting the information at the mobile station before transmission ("performs enciphering processing for the various types of information transmitted to the information center via the base station 70 and network 80" see [0070]). Itabashi discloses program code for encoding information ([0134]). Also, Itabashi must encrypt the information using a predetermined encrypting technique in order for the information

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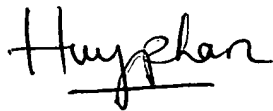
center to be able to decrypt the information. Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply the encryption technique of Itabashi to encrypt the cell-specific location information of Kimoto in order to "provide an information providing system which can prevent verification information or the like being observed or stolen at predetermined settlement locations, prevent unauthorized use, and allow settlement to be performed with a high degree of safety" see [0014].

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 571-272-7924. The examiner can normally be reached on 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE ENG
SUPERVISORY PATENT EXAMINER

Examiner: Phan, Huy Q.

AU: 2617

Date: 08/14/2006